

REMARKS

Claims 1 - 89 are pending in this application, of which claims 68 - 71 have been cancelled. By this Preliminary Amendment claims 41 - 44, 46 - 48, 52, 55 have been amended and claims 74 through 89 have been added. As indicated above, this is a Preliminary Amendment for the above-captioned Rule 1.53(b) Continuing application of U.S. Serial No. 09/476,335 filed on January 11, 2002.

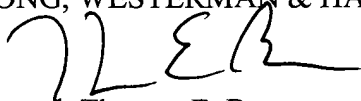
The above amendments are believed to place the application in proper condition for examination. Early and favorable action is awaited.

Attached hereto is a marked-up version of the changes made to the claim by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In the event that any fees are due in connection with this paper, please charge our Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosures: Version with markings to show changes made

VERSION WITH MARKINGS TO SHOW CHANGES MADE (10/042,345)

Claims 68 - 71 have been CANCELLED.

Claims 41 - 44, 46 - 48, 52, 55 have been AMENDED to read as follows:

41. (Amended) An exposure method for [irradiating] scanning exposure of a pattern formed on a mask onto a substrate through a projection optical system by moving the mask and substrate relative to [with a predetermined] an exposing energy beam [and projecting an image of the pattern formed on the mask onto a substrate through a projection optical system],

comprising:

obtaining a fluctuation in an attenuation factor of the projection optical system, which appears when the mask is moved relative to the exposing energy beam, in accordance with [a total] an entered energy entering into the projection optical system; and

obtaining an attenuation factor of the projection optical system on the basis of a value of a [a total] an entered energy entering into the projection optical system through the mask during the scanning exposure and on the fluctuation in the attenuation factor thereof.

42. (Amended) The exposure method as claimed in claim 41, wherein:

the [total] entered energy entering into the projection optical system through the mask is calculated on the basis of a transmittance of the mask.

43. (Amended) The exposure method as claimed in claim 41, wherein:

the [total] entered energy entering into the projection optical system through the mask is calculated by using information on a relative position of the exposing energy beam and the mask.

44. (Amended) The exposure method as claimed in claim 43, wherein:
the information on the relative position of the exposing energy beam and the mask is an optical characteristic of the mask in accordance with [the relative position of the exposing energy beam and the mask] a position of the mask relative to the exposing energy beam.

46. (Amended) The exposure method as claimed in claim 41, wherein:
[the total entered energy entering into the projection optical system through the mask] the fluctuation in the attenuation factor of the projection optical system is measured in a state in which [the exposing energy beam and] the mask [are] is [transferred] moved [relatively to each other] relatively to the exposing energy beam.

47. (Amended) The exposure method as claimed in claim 41, further comprising:
controlling an exposure quantity to be provided on the [mask] substrate taking into consideration [on the basis of] the fluctuation in the attenuation factor of the projection optical system.

48. (Amended) The exposure method as claimed in claim 41, wherein:
the fluctuation in the attenuation factor of the projection optical system is given by using two types of the fluctuation, one type is the fluctuation of the projection optical system for the [total] entering energy, the other type is the fluctuation of the projection optical system for an elapsed time after irradiation of the projection optical system with the exposing energy beam is

suspended.

52. (Amended) An exposure method for irradiating a pattern formed on a mask with [a predetermined] an exposing energy beam and projecting an image of the pattern formed on the mask onto a substrate through a projection optical system, comprising:

obtaining a fluctuation in an attenuation factor of the projection optical system in accordance with [a total] an entered energy entering into the projection optical system;

correcting the [total] entered energy entering into the projection optical system on the basis of a pattern information on the [pattern of the] mask; and

obtaining an attenuation factor of the projection optical system on the basis of a value of the corrected [total] entering energy and on the fluctuation in the attenuation factor of the projection optical system.

55. (Amended) The exposure method as claimed in claim 52, wherein:

the pattern information is an optical characteristic of the mask in accordance with [a relative position between the exposing energy and the mask] a position of the mask relative to the exposing energy beam.